

## NOTES FROM THE BOTANIC GARDENS, SYDNEY.

No.18.

BY J. H. MAIDEN AND E. BETCHE.

**DILLENiaceæ.****HIBBERTIA ELATA, n.sp.**

Wallangarra, New South Wales, on the borders of Queensland, on arid hills (E. Bêche; December, 1891; Stanthorpe, Queensland, on the top of a bare hill in the crevices of rocks (J. L. Boorman; July, 1904).

Frutex erectus, circiter 1 m. altus, pilis parce vestitus. Folia angusto-linear, 2-3 cm. longa, concava, conferta leniter fasciculata. Flores terminales in brevissimis ramulis lateralibus. Sepala ovata, circiter 8 mm. longa, exteriora ciliata. Petala non vidimus. Stamina 15-20, circa carpodia in circulum completum disposita sine staminodiis. Carpodia 3, glabra.

An erect, densely leaved shrub, 4 or 5 feet high, the young branches scantily hairy. Leaves crowded and somewhat clustered, sessile with a slightly enlarged base, and articulate shortly above the base, narrow-linear, concave, 2 to 3 cm. long, hirsute with short soft white hairs, or rarely nearly glabrous. Flowers solitary and terminal on the branches, or apparently axillary, on account of the shortness of the branches. Sepals ovate, about 8 mm. long, with membranous, more or less ciliate edges, the outer ones drawn to a point. Petals not seen. Stamens about 15 or rather more, all round the carpels, without staminodia, though some with smaller barren anthers. Carpels usually 3, glabrous.

The species is closely allied to *H. fasciculata* R.Br., and may perhaps be regarded by some as a tall form of that species, but the aspect of it is very different. It differs from it by the large size, the

much longer and less distinctly clustered leaves, larger flowers, ciliate sepals, and more numerous stamens. It is probably the tallest *Hibbertia* in New South Wales, unless *H. saligna* R.Br., occasionally attains a larger size.

*HIBBERTIA KOCHII*, n.sp.

Lowden, Western Australia (Max Koch; October, 1909).

Frutex erectus, 20-30 cm. altus, pilosus. Folia lineari-lanceolata, 12-15 mm. longa et 2 mm. lata, obtusa, margine revoluta, subtus plana pallidaque. Flores solitarii, pedunculis gracilibus circiter 30 cm. longis. Bracteola sub flore, sepalis brevior. Sepala obtusa, circiter 4 mm. longa, interiora latiora hyalino-marginata, pilosa æque quam pedunculis, foliis et ramulis. Petala flava, biloba, circiter 8 mm. longa. Stamina 10, unilateralia. Staminodia 3, unilateralia. Carpella 2, biovulata, villosa.

A small, much-branched, erect shrub barely 6 inches high in some specimens, and apparently always below one foot high, the young branches, leaves, peduncles and calyces generally loosely covered with rather long spreading hairs. Leaves linear or linear-lanceolate, 6 or 7 lines long, and about one line broad in the upper half, obtuse or with a very small recurved point, the margins revolute but leaving the smooth, somewhat paler undersurface open. Peduncles one-flowered, slender, leaf-opposed on the upper part of the stem, or terminal on short branches, 1 to  $1\frac{1}{4}$  inches long, with a small, leaf-like bracteole close under the calyx, shorter than the sepals. Outer sepals narrow-ovate, the inner ones broader, and with scarious margins, about 2 lines long, all obtuse, the spreading hairs on the midrib and margins. Petals yellow, 2-lobed, about 4 lines long. Stamens 10 or rarely more, all on one side of the carpels in a dense cluster, with three short, narrow staminodia on each side of the fertile stamens and close to them. Carpels 2, villos, 2-ovulate. [Seeds not seen.]

The new *Hibbertia* belongs to the section *Hemipleurandra*, and is very closely allied to *H. hypericoides* Benth., but differs from it essentially in the indumentum. The stellate hairs of *H. hypericoides* are entirely absent in *H. Kochii*, which has long spreading

hairs, and is further distinguished from it by the long slender peduncles; the staminodia are always few, and closely pressed to the edges of the stamens, and not dispersed round the carpels, as frequently in *H. hypericoides*.

In December, 1910, we received from Mr. Koch, from the same locality, almost glabrous specimens of the same species, with the following note:—"This is a form which grows in very moist situations, and is densely branched and prostrate. It is very commonly met with in swamps after the water has gone back a bit." These specimens are identical with the hirsute form in every respect, except that the hairs are so few that they appear glabrous at first sight.

### RUTACEÆ.

#### BORONIA DEANEI, Maiden & Betcher.

Swampy flats above Fitzroy Falls, near Moss Vale (Miss Agnes Brewster; September, 1911).

The type of this species was collected, in 1906, by Mr. Henry Deane, on the road from Clarence Siding to Wolgan, in the Blue Mountains, at an altitude of about 3,400 feet (These Proceedings, xxxi., 731, 1906).

The Fitzroy Falls specimens have rather longer and more slender leaves, the stigma is thicker, and there are some slight differences in the stamens and the shape of the petals; but the distinctions are unessential, and are perhaps caused by the difference in altitude of the two localities. These are the only localities recorded so far.

### SAPINDACEÆ.

#### NEPHELIUM FORSYTHII Maiden & Betcher.

Top of Mt. Duri, near Currabubula, 3,150 feet high (R. H. Cambridge; August, 1912).

A new locality for a rare plant. The tree was described by us in these Proceedings (xxvi., 81, 1901) from specimens collected by the late Mr. W. Forsyth, in the Tia Canyon, in the Waleha district. The new locality (Peel Range) brings the range of the species considerably to the west, since the former locality is east of the Moonbi Range.

*DODONÆA HIRSUTA*, n.sp.

Jennings or Wallangarra (New South Wales-Queensland border, and occurring in both States). (J. L. Boorman; October, 1901, and July, 1904).

Frutex erectus, ramosus,  $\frac{3}{4}$ -1 $\frac{1}{2}$  m. altus. Folia ramulique brevibus patentibusque pilis dense vestita, et sine visciditate quæ propria generis est. Folia conferta, cuneata vel fere triangularia, in brevissimum petiolum angustata, apice lato truncato sed distincte 3-denticulato, 5-6 mm. longa, et apice fere æquilata, marginibus recurvatis. Flores axillares plerumque solitaires in pedunculis gracilibus foliis leniter longioribus. Sepala lanceolata. Capsulæ grandiusculæ, tota longitudine alatæ, et utrinque æque rotundatæ, rubro-brunnæ, hirtulæ. Flores masculos et semina matura non vidimus.

We described this plant in these Proceedings (xxvii., 57, 1902) as a variety of *D. peduncularis*, but we have since come to the conclusion that the characters separating it from that species are too marked and constant to maintain that view, and that it fully deserves to stand as a distinct species.

It is an erect bushy shrub, 2 to 6 feet high, the leaves and young branches densely covered with short spreading hairs, and without a trace of the viscosity so common in the genus. Leaves crowded, cuneate, or almost triangular in outline, narrowed into a very short petiole, and with a broad, truncate but deeply 3-toothed summit, 5-6 mm. long, and nearly as broad at the top, the margins recurved. Flowers axillary, mostly solitary, on slender peduncles shortly exceeding the leaves. Sepals lanceolate. Capsules rather large, winged from the base to the top, and equally rounded at both ends, of a reddish-brown colour, slightly hirsute, as well as the sepals and peduncles. Flowers of both sexes, and ripe seeds not seen.

## LEGUMINOSÆ.

*CROTALARIA MITCHELLI* Benth., var. *TOMENTOSA* Ewart.

Thurlow Downs to Berrawinia Downs in the Paroo River district, New South Wales (J. L. Boorman; October, 1912).

Professor Ewart described this variety in Proc. Roy. Soc. Vict. xix., 37 (1906) from specimens collected between the Finke River and Charlotte Waters, Central Australia. We can now add a second locality, which shows the great extent of its range. The Paroo River specimens agree well with Prof. Ewart's description, except that the leaves are still smaller, not exceeding 2 cm. in all our specimens, while the axis of inflorescence sometimes exceeds 5 cm.

### MYRTACEÆ.

#### KUNZEA PARVIFOLIA Schau., var. ALBA, n.var.

Rockley (J. L. Boorman; November, 1906); near Braidwood (R. H. Cabbage; November, 1908).

The colour of the flowers is normally lilac-purple in *K. parvifolia*, but we have two white-flowering specimens in the Herbarium, and we find that the white forms are also always glabrous or nearly so. The glabrous and white form from Braidwood is a heath-like shrub with smaller flowers and leaves, and seemed to us, at first, a well-marked species, but the specimens from Rockley are, in habit and appearance, exactly like the typical *K. parvifolia*, and cannot be separated from it specifically.

*Kunzea capitata* Reichb.—We may mention here that *Kunzea capitata* Reichb., also seems to have a white-flowered form.

Specimens of a white *Kunzea* from Ulladulla and Milton, collected by Mr. R. H. Cabbage, seem to be a form of that species, but the material is at present too imperfect to decide whether it is a distinct species or a variety.

#### KUNZEA CABBAGEI, n.sp.

On the plateau east of Mt. Werong, 3,700 feet high (R. H. Cabbage; October, 1909); Big Plain, near Mt. Werong, 3,800 feet high (Richard Hind Cabbage; December, 1911).

Frutex parvus,  $\frac{1}{3}$ -1 m. altus. Folia alterna, angusto-obovata, 4-5 mm. longa, brevissime petiolata, margine lanato. Folia matura lævia nitentiaque. Flores 6-8, sericei; in parvis capitibus terminalibus in duabus angustis bracteolis et una lata bractea. Calyx 3-4

mm. longus, breve 5-lobatus. Petala fere orbicularia, alba, calycis lobis circiter bis æquilonga. Stamina circiter 20 in uno ordine. Ovarium biloculare, paucis pendulis ovulis (plerumque duobus) in uno loculamento.

A small shrub up to 3 feet high, or almost prostrate in exposed situations, nearly glabrous in age, the young shoots silky-hairy. Leaves alternate, narrow-obovate, 4-5 mm. long, narrowed at the base into a very short flat petiole, ciliate and sparingly hairy when young, smooth and shining when old. Flowers about 6 to 8, in small heads terminating short lateral branches, each flower between two narrow bracteoles and supported by a broad scale-like bract, all silky with short hairs. Calyx hardly 3 to 4 mm. long, the lobes about one-third as long as the tube. Petals very small, nearly orbicular, white, about twice as long as the calyx-lobes. Stamens about 20, in a single row, very short, the filaments about twice as long as the petals. Ovarium 2-celled, with two pendulous ovules in each cell.

The new species belongs to the section *Eukunzea* (with few pendulous ovules), which is represented in New South Wales by a single species, *K. Muelleri* Benth.

It is nearest allied to the Western Australian *K. micrantha* Schau., but is easily distinguished from it by the small white flowers and the silky hairs. The flowers are very inconspicuous; it is the least showy of all New South Wales species. Mr. Cambage informs us that the leaves are sweet-scented.

#### EUGENIA TOMLINSII, n.sp.

Alstonville (Dr. W. H. Tomlins; December, 1909, in flower; August, 1912, in fruit).

Arbor multicaulis circiter 12-15 m. alta. Folia ovato-lanceolata, 5-5½ cm. longa et 2½-3 cm. lata, in acumen obtusum angustata, supra atrovirens, subtus pallidiora. Petiola 5 vel 6 mm. longa. Flores numerosi in terminalibus paniculis plerumque 6 in ultimis ramis paniculæ. Calycis tubus turbinatus circiter 2 mm. longus, super ovulum breve elongatus. Lobi 4, persistentes, breve-obtusi. Petala 4 in calyptra parva planaue decidentes. Stamina numerosa

triplice ordine, circiter 4 mm. longa. Antheræ loculamenta parallela. Ovulum biloculare. Fructus depresso-globosi 2-2½ cm. in diametro metientes et vix 1½ cm. alti, cœrulei. Semen solitarium.

A middle-sized tree, with a thick stem 65 inches in circumference at a height of 1 yard from the ground, according to Dr. Tomlins' measurements of the type-tree, and with a moderately spreading much-branched crown. Bark of a brownish-white colour, rather rough, easily pulling off in large pieces, leaving a smooth, light-brown surface underneath. Leaves ovate-lanceolate, generally 2 to 2¼ inches long, and 1 to 1½ inches broad, tapering into an obtuse point, dark green above, paler underneath, finely and irregularly penniveined and loosely reticulate, the oil-dots distinctly visible when dry. Petioles short, about ¼ inch long. Flowers numerous and crowded in terminal thyrsoid panicles, usually six together, shortly pedicellate on the ultimate panicle-branches. Buds clavate. Calyx-tube turbinate, scarcely above a line long, produced above the ovulary, and with four long-persistent shallow obtuse lobes. Petals four, falling off together in a small shallow calyptra. Stamens numerous, in about 3 rows (154 in the flowers counted), about 4 mm. long; anther-cells parallel. Ovulary 2-celled. Fruit depressed-globular, 2 to 2½ cm. in diameter, and not quite 1½ cm. high, of a lilac-pink colour, one-seeded.

The new *Eugenia* belongs to the Section Syzygium, and is closely allied to *E. Ventenatii* Benth., but the general aspect is so different, that we can scarcely regard it as a form of the same species. *E. Tomlinsii* is chiefly distinguished from *E. Ventenatii* by the short and broad leaves, less than half as long as those of *E. Ventenatii*, by the smaller, much more numerous and crowded flowers, and by the bluish fruits. The blue fruits distinguish it from any other Australian *Eugenia* of the Section Syzygium; the only other Australian *Eugenia* with blue fruits, *E. cyanocarpa* F.v.M., belongs to the Section Jambosa.

We do not know, at present, the range of the tree. Dr. Tomlins has seen only a single tree. We have not received it from any other locality, and F. M. Bailey does not record a *Eugenia* from Queensland, answering to the above description.



## COMPOSITÆ.

*BRACHYCOME IBERIDIFOLIA* Benth. New for New South Wales.

Waverley Downs to Hungerford, Paroo River (J. L. Boorman; October, 1912).

The species is very common in Western Australia, and it is also recorded from North Australia, but from no other State. As our specimens come from the north-west corner of New South Wales, not many miles from the border of Queensland, and also not far from the border of South Australia, it seems likely that both Queensland and South Australia will be added to the range of the species, when the flora of the interior of Australia is better known.

*PLUCHEA BACCHAROIDES* F.v.M. New for New South Wales.

Waverley Downs to Hungerford (J. L. Boorman; October, 1912).

Previously recorded from Queensland and North Australia.

According to the collector's notes, it is, in the New South Wales locality, a showy shrub of 3 to 5 feet in height, with the aspect of a cultivated *Eupatorium*; the florets are much longer than the involucre, and the tips of the pappus are of a pale purplish colour.

*PODOLEPIS CUPULATA*, n.sp.

Wanganella, near Hay (Miss Edith Officer; October, 1903).

Planta annua, erecta, ramosissima, circiter 15 cm. alta, parciter lanuginosa. Folia lanceolata, basi decurrenti amplexantia, inferiora circiter 5 cm. longa, superiora breviora et basi latiora. Florum capita numerosa, in pedunculis brevibus, rigidis et filiformibus. Involuerum cylindricum vel fere campanulatum, circiter 6 mm. longum, squamis lævibus et fimbriatusculis. Involueri squamæ exteriores, sessiles, latæ et obtusæ, mediæ breve unguiculatæ lamina magna et acuta, interiores unguibus rigidis, erectis, linearibus et laminis parvis. Flosculi circiter 40, omnes fere æquales, exteriores interioribus majores, nulli ligulati. Achenæ planum factæ (maturas non vidimus) circiter 10 pappi setis, basi barbellatis.

An erect annual, much-branched from the root, 5 to 6 inches high and up to 8 inches broad in the specimens seen, very sparingly woolly-hairy, or almost glabrous in age. Radical leaves not seen.



Stem-leaves lanceolate, the lowest rarely 2 inches long and 3 to 5 lines broad, sessile, stem-clasping and shortly decurrent, the upper ones gradually shorter and with a broader stem-clasping base. Flower-heads very numerous, on rigid, filiform, sometimes clustered peduncles rarely above 1 inch long. Involucre shortly cylindrical or almost as broad as long when fully developed, about  $\frac{1}{4}$  inch in diameter. Involucral bracts smooth, with somewhat fimbriate margins, the outer ones sessile, broad, obtuse and wholly scarious, the intermediate ones with a short narrow claw and a large heart-shaped scarious lamina, somewhat like the "spade" in playing cards, with the point more drawn out and reflexed, the innermost ones with a broad-linear long erect claw, and a much smaller scarious lamina. The thick and stiff claws of the innermost involucral bracts are slightly connate at the base, and cohere into a solid cup containing the florets. Florets about 40, all nearly equal and none ligulate, the outer ones slightly exceeding the involucre, the inner ones shorter. Achenes compressed; pappus-bristles about 10, very deciduous on the marginal flowers, all barbellate from the base.

The new species is most nearly allied to *P. Lessoni* Benth., which it resembles much in habit and foliage, but from which it differs in the more numerous and smaller flower-heads, and shorter peduncles. It differs from all described species of *Podolepis* by the peculiar cup formed by the stiff, erect claws of the innermost involucral bracts.

### GOODENIACEÆ.

#### GOODENIA HAVILANDI, n.sp.

Shuttleton, Nymagee (W. Bäuerlen; September, 1903); Cobar (Archdeacon F. E. Haviland; October, 1911).

Suffrutex multicaulis, caulibus adscendentibus, undique glanduloso-pubescens,  $1\frac{1}{2}$ -3 dc. altus. Folia radicales linearo-lanceolata, cum petiolo circiter 7 cm. longa et 5-6 mm. lata, integerrima vel remote serrata. Folia caulina pauca, et gradatim minora angustioraque. Flores parvi, plerumque solitares in pedunculis rigidis, filiformibus, sub fructibus patentibusque, 15-20 cm. longi. Bracteolæ desunt. Corolla flava, circiter 6 cm. longa, extus brevissime

*pilosa*. Capsula globosa dissepimento brevissimo. Semina 8-10, plana vel concava, margine pallido cincta.

An ascending perennial with a tufted, somewhat woolly-hairy rootstock, minutely glandular-pubescent all over, about 1 foot high in the fruiting specimens from Cobar, and half as high in the flowering specimens from Shuttleton. Radical leaves linear-lanceolate, about 3 inches long including the long petiole, and not above 3 lines broad, entire or occasionally with one or two remote teeth; stem-leaves few and distant, gradually smaller and reduced to linear or filiform bracts under the peduncles. Flowers small, solitary on filiform rigid peduncles, or clustered at the top of the flowering branches. Peduncles without bracteoles, almost horizontally spreading under the fruit, rarely above  $\frac{3}{4}$  inch long. Corolla yellow, scarcely 3 lines long, minutely hairy outside. Capsule globular, with a very short dissepiment, and less than 10 flat or concave seeds, black with a light-coloured border.

The new species belongs to Benthams's Section *Pedicellosæ*, and is most nearly allied to *G. pusilliflora* F.v.M. It is distinguished from it chiefly by the glandular hairs, and by the entire or almost entire leaves. The glandular-hairy species of *Pedicellosæ* were previously confined to West Australia. This is the first one described from East Australia.

### OLEACEÆ.

*JASMINUM SINGULIFLORUM* Bailey & F.v.M. New for New South Wales.

Woodburn, Richmond River (Mrs. F. E. Haviland; July, 1886).

Though collected 27 years ago, and sent at the time to Baron von Mueller for determination, it has not been previously recorded from this State. It turns out to be fairly common in the rich brushes on and between the Richmond and Tweed Rivers, but it runs into the forms of *J. didymum* Forst., var. *pubescens*, and does not seem to be a well-defined species. The inflorescence of the pubescent forms of *J. didymum* is often reduced to very few flowers; in the extreme forms, they are reduced to a single flower, and that is *J. singuliflorum*.

We have to thank the Ven. Archdeacon F. E. Haviland for the above specimen.

### **SOLANACEÆ.**

**SOLANUM HYSTRIX** R.Br.    New for New South Wales.

Brindingabba to Arara, and Arara to Lake Eliza in the Cuttaburra Creek (Paroo River) district (J. L. Boorman; October, 1912).

Previously recorded from South and Western Australia.

Our specimens differ from the type in the leaves being sprinkled with stellate hairs underneath, while the type is quite glabrous, but they show distinctly the small spines on the corolla, a character unique in this species; and they agree, in habit, exactly with our South Australian specimens from Mt. Hergott.

The prickles are bright copper-coloured, the fruits yellow when ripe, about  $\frac{1}{2}$  inch in diameter.

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[I regret to say that, a month after this paper was read, my colleague, Mr. Betcher, died, on 28th June, 1913.—J.H.M.]